IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

1. (Previously Presented) A light-transmitting apparatus for demultiplexing an input signal completing wavelength division multiplexing into signals of wavelength components with wavelengths different from each other and for transmitting each of said wavelength components through a transmission line provided for transmission of said wavelength components, said light-transmitting apparatus comprising:

a wavelength-count-detecting unit detecting the number of wavelengths of wavelength components included in said input signal and determining whether the number of wavelengths is normal or abnormal;

a plurality of extraction units provided for each of said wavelength components, said extraction units extracting an identifier set in each of said signals of said wavelength components;

a plurality of identifier-detecting units each associated with one of said extraction units and determining whether or not each of said identifiers extracted by said extraction units is normal; and

a judgment unit judging whether or not each of the components of the input signal is down or each of said identifier is abnormal for each of said wavelength components on the basis of a detection result output by said wavelength-count-detecting unit and a detection result output by said identifier-detecting unit associated with said wavelength component, wherein each of said signals of said wavelength components is a frame signal and each said identifier is set in a predetermined position of said frame and identifies a channel.

2. (Original) A light-transmitting apparatus according to claim 1 wherein, if said wavelength-count-detecting unit outputs a normal result of detection but at least a particular one of said identifier-detecting units outputs an abnormal result of detection, said judgment unit determines that an identifier of one of said wavelength components that is associated with said particular identifier-detecting unit is abnormal.

3. (Original) A light-transmitting apparatus according to claim 2 wherein, if said wavelength-count-detecting unit outputs an abnormal result of detection, said judgment unit determines that an optical input of one of said wavelength components is down.

4-7. (Cancelled)

8. (Previously Presented) A light-transmitting apparatus for multiplexing input signals into a multiplexed signal and transmitting said multiplexed signal, said light-transmitting apparatus comprising:

a plurality of receiving units receiving said input signals from a plurality of transmission lines and for converting said input signals into optical signals having wavelengths different from each other;

a plurality of light-power-detecting units forming judgments as to whether or not light powers of said optical signals output by said receiving units are abnormal;

a multiplexing unit multiplexing said optical signals output by said receiving units;

an OSNR-detecting unit detecting signal-to-noise ratios of wavelength components included in a multiplexed signal output by said multiplexing unit and for forming a judgment as to whether or not the magnitude of a noise included in each of said wavelength components is abnormal; and

a judgment unit judging an error for each of said wavelength components on the basis of detection results received from said light-power-detecting units and a detection result received from said OSNR-detecting unit;

wherein said judgment unit judges the optical signal being down and outputs an alarm indicating that an input of the optical signal is down when said detection result of said light-power-detecting unit indicates the optical signal is abnormal, and judges the optical signal being degraded and outputs an alarm indicating that the optical signal is degraded when said detection result of said light-power-detecting unit indicates the optical signal is normal and said detection result of said OSNR-detecting unit regarding the optical signal corresponding to said wavelength component designates an abnormal signal-to-noise ratio, and wherein said alarm is displayed so that the optical signal being degraded and the input of the optical signal being down can be distinguished.

9. (Original) A light-transmitting apparatus according to claim 8, further comprising a

variable optical filter passing on only said multiplexed signal's wavelength component having a wavelength in a pass band set in said variable optical filter, wherein said OSNR-detecting unit detects a signal-to-noise ratio of said wavelength component passed on by said variable optical filter.

10. (Original) A light-transmitting apparatus according to claim 9 wherein said OSNR-detecting unit detects said signal-to-noise ratio of any particular one of said wavelength components on the basis of a light power of a signal light output by said variable optical filter set at a pass band having a peak-output wavelength coinciding with an intermediate wavelength between a peak-output wavelength of a signal-light level of said particular wavelength component and a peak-output wavelength of a signal-light level of one of said wavelength components that is adjacent to said particular wavelength component.

11. (Original) A light-transmitting apparatus according to claim 9 wherein said OSNR-detecting unit detects said signal-to-noise ratio of any particular one of said wavelength components on the basis of a noise level and a light power of a signal light output during an in-service state by said variable optical filter set at a pass band coinciding with a wavelength band of said particular wavelength component where said noise level is defined as a light power of a signal light output prior to said in-service state by said variable optical filter set at said pass band coinciding with said wavelength band of said particular wavelength component.

12. (Original) A light-transmitting apparatus according to claim 9 wherein said OSNR-detecting unit detects said signal-to-noise ratio of any particular one of said wavelength components on the basis of:

a light power of a signal light output by said variable optical filter set at a pass band having a peak-output wavelength coinciding with an intermediate wavelength between a peak-output wavelength of a signal-light level of said particular wavelength component and a peak-output wavelength of a signal-light level of one of said wavelength components that is adjacent to said particular wavelength component; and

a light power of a signal light output by said variable optical filter set at a pass band having a peak-output wavelength coinciding with a peak-output wavelength of a signal-light level of said particular wavelength component.

13. (Original) A light-transmitting apparatus according to claim 9 wherein said

judgment unit determines that a particular one of said wavelength components has deteriorated if detection results output by said light-power-detecting unit for said wavelength components are normal but a detection result output by said OSNR-detecting unit for said particular wavelength component is abnormal.

14-17. (Cancelled)

18. (Previously Presented) A wavelength-division-multiplexing communication system including a first line terminal equipment, a second line terminal equipment, a plurality of transmission paths connected to a receiving side of said first line terminal equipment and an optical transmission line connecting said first line terminal equipment to said second line terminal equipment, said wavelength-division-multiplexing communication system comprising:

a plurality of receiving units provided in said first line terminal equipment and receiving input signals having wavelengths different from each other from said respective transmission paths and outputting wavelength components each generated at one of said wavelengths to include an identifier;

a multiplexing unit provided in said first line terminal equipment and multiplexing signal lights representing said wavelength components output by said receiving units to generate a wavelength-division-multiplexed signal and for transmitting said wavelength-division-multiplexed signal to said second line terminal equipment through said optical transmission line;

a wavelength-count-detecting unit provided in said second line terminal equipment and detecting the number of wavelengths of wavelength components included in said wavelength-division-multiplexed signal received from said first line terminal equipment through said optical transmission line;

a demultiplexing unit provided in said second line terminal equipment and used for demultiplexing said wavelength-division-multiplexed signal received from said first line terminal equipment through said optical transmission line into said wavelength components and for outputting said wavelength components to output terminals;

a plurality of extraction units provided for each of said wavelength components in said second line terminal equipment, said extraction units extracting said identifier set in each of said wavelength components;

a plurality of identifier-detecting units each associated with one of said extraction units and determining whether or not each said identifier extracted by said extraction units is normal; and

a judgment unit provided in said second line terminal equipment judging whether or not an optical signal is down or said identifier is abnormal for each of said wavelength components on the basis of a detection result output by said wavelength-count-detecting unit and a detection result output by said identifier-detecting unit associated with said wavelength component, wherein each of said signals of said wavelength components is a frame signal and each said identifier is set in a predetermined position of said frame and identifies a channel.

19. (Cancelled)

20. (Previously Presented) A method of transmitting light, comprising:

detecting a number of wavelengths included in an input signal;

determining whether the number of wavelengths is normal;

storing an identifier set in a wavelength component associated with each wavelength in a predetermined position for each wavelength;

extracting the identifier set in each of the wavelength components;

determining whether or not said identifier set in said wavelength component associated with each wavelength is normal; and

judging whether said wavelength component is missing based on the number of wavelengths or whether said identifier set is abnormal.

21. (Previously Presented) An apparatus for receiving a wavelength-division-multiplexed signal containing a plurality of wavelength components, comprising:

a demultiplexing unit demultiplexing the wavelength-division-multiplexed signal into each of said plurality of wavelength components having an identifier stored in a predetermined position in each of said plurality of wavelength components and outputting said wavelength components to output terminals;

a plurality of extraction units extracting an identifier stored in the predetermined position in each of the plurality of wavelength components;

a plurality of power detection units detecting a power of each of the plurality of wavelength components;

a plurality of determination units determining whether or not said identifier stored in the predetermined position in each of the plurality of wavelength components is normal; and

a judgment unit judging whether or not each of the plurality of wavelength components in an optical signal is down and whether said identifier is abnormal for each of said wavelength

components based on a detection result output by the power detection unit associated with each of the wavelength components and a detection result output by the determination unit associated with each of the wavelength components, wherein each identifier identifies a channel associated with each of the wavelength components and is uniquely determined by the channel.